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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,332	01/25/2002	Yoav Kotser	6727/1K235US1	1518

7590 08/26/2005

DARBY & DARBY P.C.
805 Third Avenue
New York, NY 10022

EXAMINER

SERRAO, RANODHI N

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,332

Applicant(s)

KOTSER, YOAV

Examiner

Ranodhi Serrao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,11-16,18-22 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,11-16,18-22 and 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/11/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

PD

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3, 5-9, 11-16, 18-22, and 24-26 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant argued in substance the method of, "generating a signaling frame in accordance with a spanning tree protocol (STP) in a layer 2 transparent local area network system (TLS), which uses the label-switched tunnels" in the independent claims 1 and 14. The new grounds teach this feature. (See below).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-3, 5-9, 11-16, 18-22, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,339,595 to Rekhter et al. ("Rek") and U.S. Patent No. 6,304,575 to Carroll et al. ("Car").
5. As per claim 1, Rek teaches a method for controlling a system of label-switched tunnels through a communication network (column 35, lines 7-15), the method comprising: pushing a signaling label onto a signaling frame at a first node in the network (column 22, lines 41-49); sending the signaling frame through the label-switched tunnels to one or more recipient nodes in the network (column 7, lines 23-49);

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popping the signaling label off the signaling frame at the one or more recipient nodes (column 21, lines 24-30); and responsive to the signaling label, processing the signaling frame at the one or more recipient nodes so as to eliminate loops formed by the label-switched tunnels (column 24, lines 51-57). But fails to teach a method of generating a signaling frame in accordance with a spanning tree protocol (STP) in a layer 2 transparent local area network system (TLS). However, Car teaches a method of generating a signaling frame in accordance with a spanning tree protocol (STP) in a layer 2 transparent local area network system (TLS) (see Car, col. 3, lines 5-26 and col. 7, line 66-col. 8, line 14 and col. 18, lines 17-39). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Rek to a method of generating a signaling frame in accordance with a spanning tree protocol (STP) in a layer 2 transparent local area network system (TLS) in order to generate loop-free paths in token ring networks (see Car, col. 1, lines 4-7).

6. As per claims 2, 3, 5-9, and 11-13, the above-mentioned motivation of claim 1 applies fully in order to combine Rek and Car.

7. As per claim 2, Rek and Car teach wherein the label-switched tunnels comprise multiprotocol label switching (MPLS) tunnels (see Rek, column 41, lines 28-34).

8. As per claim 3, Rek and Car teach wherein pushing the signaling label comprises inserting an agreed-upon value in the signaling label indicating that the signaling frame belongs to a protocol for eliminating the loops formed by the label-switched tunnels in a transparent local area network system (TLS) (see Rek, column 2, lines 8-19, column 10, lines 18-33, and column 38, line 66-column 39, line 10) and wherein popping the

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signaling label comprises determining that the signaling frame is to be processed in accordance with the protocol responsive to the agreed-upon value in the signaling label (see Rek, column 10, lines 40-62).

9. As per claim 5, Rek and Car teach wherein processing the signaling frame comprises setting a transmitting state for each one of the label-switched tunnels (see Rek, column 42, lines 10-17).

10. As per claim 6, Rek and Car teach wherein for at least one of the label-switched tunnels, the transmitting state is set to a blocking state so as to prevent frames from being sent across the at least one of the label-switched tunnels, in order to eliminate a loop in the TLS (see Rek, column 48, lines 20-34: wherein parameter closing serves the purpose of a blocking state).

11. As per claim 7, Rek and Car teach wherein for at least one of the label-switched tunnels, the transmitting state is an active state so as to allow frames to be sent across the at least one of the label-switched tunnels (see Rek, column 42, lines 10-17).

12. As per claim 8, Rek and Car teach wherein sending the signaling frame comprises sending the signal frame through the label-switched tunnels that are used for carrying user data (see Rek, column 22, lines 50-61).

13. As per claim 9, Rek and Car teach wherein the label-switched tunnels are arranged to provide a virtual bridge service for carrying the user data (see Rek, column 22, lines 18-31 and lines 50-61).

14. As per claim 11, Rek and Car teach wherein the TLS is one of a plurality of transparent local-area network services (TLSs) operative in the communication network

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(see Rek, column 1, line 58-column 2, line 7), and wherein pushing the signaling label comprises pushing information identifying the signaling frame with one of the plurality of TLSs (see Rek, column 38, lines 6-12), and wherein eliminating the loops comprises eliminating the loops from the one of the plurality of TLSs that corresponds to the signaling frame (see Rek, column 24, lines 51-57).

15. As per claim 12, Rek and Car teach wherein pushing the information identifying the signaling frame comprises pushing a channel label onto the signaling frame along with the signaling label (see Rek, column 16, line 53-column 17, line 4), and wherein popping the signaling label comprises additionally popping the channel label off the signaling frame (see Rek, column 22, lines 50-61), and wherein processing the signaling frame comprises processing the channel label together with the signaling frame (see Rek, column 36, lines 53-65).

16. As per claim 13, Rek and Car teach wherein pushing the information identifying the signaling frame comprises adding the information to the signaling label, and wherein processing the signaling frame comprises processing the information identifying the signaling frame from the signaling label together with the signaling frame (see Rek, column 36, lines 53-65).

17. As per claim 14, Rek teaches a communication device for operation as one of a plurality of nodes in a communication network (column 16, line 53-column 17, line 4), the device comprising: one or more ports, adapted to send and receive traffic via label-switched tunnels through the communication network (column 14, line 65-column 15, line 12 and column 22, lines 50-61); and a traffic processor which is coupled to the one

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or more ports, and is adapted to carry out a protocol for eliminating loops formed by the label-switched tunnels (column 24, lines 51-57), by pushing a signaling label onto a signaling frame and sending the signaling frame through at least one of the ports via the label-switched tunnels to one or more recipient nodes in the network (column 7, lines 23-49 and column 22, lines 41-49), causing the recipient nodes to pop the signaling label off the signaling frame and responsive to the signaling label, to process the signaling frame so as to eliminate the loops formed by the label-switched tunnels (column 21, lines 24-30). But fails to teach a device adapted to send and receive traffic over a layer 2 transparent local area network system (TLS) and adapted to carry out a spanning tree protocol (STP). However, Car teaches a device adapted to send and receive traffic over a layer 2 transparent local area network system (TLS) (see Car, col. 7, line 66-col. 8, line 14) and adapted to carry out a spanning tree protocol (STP) (see Car, col. 3, lines 5-26). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Rek to a device adapted to send and receive traffic over a layer 2 transparent local area network system (TLS) and adapted to carry out a spanning tree protocol (STP) in order to generate loop-free paths in token ring networks (see Car, col. 1, lines 4-7).

18. As per claims 15, 16, 18-22, and 24-26, the above-mentioned motivation of claim 14 applies fully in order to combine Rek and Car.

19. As per claim 15, Rek and Car teach wherein the label-switched tunnels comprise multiprotocol label switching (MPLS) tunnels (see Rek, column 41, lines 28-34).

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20. As per claim 16, Rek and Car teach wherein the traffic processor is adapted to insert an agreed-upon value in the signaling label (see Rek, column 2, lines 8-19, column 10, lines 18-33, and column 38, line 66-column 39, line 10), and wherein the agreed-upon value is recognized by the recipient nodes so as to determine that the signaling frame is to be processed in accordance with the protocol (see Rek, column 10, lines 40-62).

21. As per claim 18, Rek and Car teach wherein the traffic processor is adapted to set a transmitting state for each one of the label-switched tunnels (see Rek, column 42, lines 10-17).

22. As per claim 19, Rek and Car teach wherein for at least one of the label-switched tunnels, which was found to be part of one of the loops, the transmitting state is set to a blocking state in which frames are prevented from being sent across the at least one of the label-switched tunnels, in order to eliminate a loop in the TLS (see Rek, column 48, lines 20-34: wherein parameter closing serves the purpose of a blocking state).

23. As per claim 20, Rek and Car teach wherein for at least one of the label-switched tunnels, the transmitting state is an active state in which frames are allowed to be sent across the at least one of the label-switched tunnels (see Rek, column 42, lines 10-17).

24. As per claim 21, Rek and Car teach wherein the signaling frame is sent through the label-switched tunnels that are used for carrying user data (see Rek, column 22, lines 50-61).

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25. As per claim 22, Rek and Car teach wherein the label-switched tunnels are arranged to provide a virtual bridge service for carrying the user data (see Rek, column 22, lines 50-61 and column 22, lines 18-31).

26. As per claim 24, Rek and Car teach wherein the TLS is one of a plurality of transparent local-area network services (TLSs) operative in the communication network (see Rek, column 1, line 58-column 2, line 7), and wherein the traffic processor is adapted to identify the signaling frame with one of the plurality of TLSs (see Rek, column 38, lines 6-12) so as to eliminate loops from the one of the plurality of TLSs that corresponds to the signaling frame (see Rek, column 24, lines 51-57).

27. As per claim 25, Rek and Car teach wherein the traffic processor is adapted to push a channel label onto the signaling frame containing the information identifying the signaling frame (see Rek, column 16, line 53-column 17, line 4), and wherein the channel label is popped off the signaling frame by the recipient nodes for use in processing the signaling frame (see Rek, column 22, lines 50-61).

28. As per claim 26, Rek and Car teach wherein the traffic processor is adapted to add the information identifying the one of the plurality of TLSs to the signaling label, and wherein the information is used by the recipient nodes in processing the signaling frame (see Rek, column 36, lines 53-65).

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RUPAL DHARIA
SUPERVISORY PATENT EXAMINER